April 29, 2022

Des Gillen
President
BP-Husky Refining LLC
4001 Cedar Point Road
Oregon, OH 43616
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City of Toledo
Division of Environmental Services
348 S. Erie Street
Toledo, OH 43604
Attn.: Peter Park

RE: Title V Quarterly Deviation Report – 1st Quarter 2022

Dear Peter:

The Title V Permit (P00128721) issued to BP-Husky Refining LLC Toledo Refinery (BP-Husky) effective on November 18, 2021, requires reports to be submitted quarterly outlining known deviations of emission limitations, operational restrictions, or control device operating parameter limitations. The permit also requires semi-annual reports outlining deviations of requirements in the permit, principally the monitoring, recordkeeping, and reporting (MRR) requirements. The permittee chooses to report known MRR semi-annual deviations identified during the quarter in its quarterly deviation report.

This letter and its attachments constitute the Title V Deviation Report reflecting the deviations identified during the first quarter of the 2022 calendar year (January 1 through March 31, 2022), including MRR deviations identified at the time of this report that are required to be reported semi-annually. The requirement for these reports is contained in Part A. of the Title V Permit as Standard Term and Condition, A.2.c. This report also satisfies the requirement for such reporting in OAC Rule 3745-77-07(A)(3)(c).

In order to consolidate reports, this letter and its attachments also constitute the deviation reports for all the Permits to Install (PTIs) that have been incorporated into the Title V Permit and which have PTI requirements for deviation reporting. All known deviations of the Title V Permit and currently effective PTIs are presented in the attached quarterly deviation report. Also, the following provides some additional background on a few of the issues relevant to this report.

In early 2022, BP-Husky completed an internal review of 2021 Fugitive Dust documentation. During this review, it was discovered that the fugitive dust inspection documentation indicated that control measures were needed based on the dust inspection; however, the watering reports could not be located to show that the required watering took place. Deviations from these requirements were not properly reported in the 1H2021 fugitive dust semimanual report nor were they included in the quarterly Title V Deviation reports that were submitted for 2021. These deviations are being submitted with the 2021

Annual Compliance Certification and are not included in this quarterly report as newly identified deviations.

FCCU (P007) Trip:

On March 25, 2022, at approximately 23:04 hours, the FCC tripped offline due to an inadvertent actuation of its wet gas compressor emergency shutdown switch. Emergency shutdown procedures were followed, and flaring was minimized to the extent possible. The FCC was placed into hot standby, the FCC Regen exhaust gas was diverted from the CO Boiler to the bypass stack, and the CO Boiler remained online utilizing refinery fuel gas, until the unit was restarted the following day. To maintain refinery steam supply and prevent further unit upsets, the CO Boiler had to increase firing to offset the loss of process heat that was being supplied by the FCC Regen exhaust gas. An investigation is underway for the event and a Root Cause Analysis will be submitted to the agency once it is completed.

FCCU CO:

***Citation: P007 Part C.12.b)(2)c – [PTI 04-01290 issued 7/25/2002*]**

Hourly CO concentrations from the FCCU exceeded the 500 ppm 1-hr average limit for a total of fifteen (15) periods during the quarter. However, the permit requirement for this 500-ppm emission limit does not apply during start-up, shutdown, or malfunction of the FCCU or CO control equipment, which includes the CO Boiler, provided that during the start-up, shutdown, or malfunction, to the extent practicable, the facility is operated and maintained in a manner consistent with good air pollution control practices. Although the CO was exceeded, BPH was in compliance with MACT UUU Work Standard Practices for Organic HAPs [§63.1565 (a)(5)(ii)] which allows for maintaining the oxygen (O_2) concentration in the exhaust gas from the catalyst regenerator at or above 1 volume percent (dry basis) during startup, shutdown and hot standby of the FCCU. BPH demonstrated good air pollution control practices by complying with the alternative work standards practice during the entire event for both metal HAPs and organic HAPs. For these reasons, no deviations for excess emissions are reported for this operating period.

FCCU NOx:

Citation: P007 Part C.12.b)(2)k, C.12.f)(1)l - [PTI P0105902 issued 5/18/2011]

The FCCU NO_x limit of 93.4 ppmvd at 0% O_2, 7-day rolling average, does not apply during periods of start-up, shutdown, or malfunctions and only applies to the FCCU exhaust whenever there is feed to the FCCU. When the FCCU is in its normal operating mode, it is tied to the CO Boiler and NO_x emissions are continuously monitored by the FCC's/CO Boiler NO_x CEMS located on the CO Boiler's electrostatic precipitator (ESP) stack. On occasions when the FCCU exhaust is bypassed directly to atmosphere via the CO Boiler bypass stack, as can occasionally happen during start-ups, shutdowns, and malfunctions, NO_x emissions are continuously monitored by the FCCU Regen NO_x CEMS located on the FCCU Regenerator vent line, upstream of the bypass stack. NO_x was continuously monitored for the entire event however, the NOx during this event was exempt based on language in the Title V Permit. For these reasons, no deviations for excess emissions are reported for this

operating period. All NO_x emissions will be included in the 365-day limit which applies at all times when the FCCU is operating.

FCCU Opacity:

Citation: P007 Part C.12.b)(2)u, C.12.f)(1)a

The opacity from the COB stack was greater than 10% for a total of four (4) 3-hr averages. These periods are exempt per the CAM plan. According to the CAM plan, this limit is used as a performance indicator to assure proper operation and effectiveness of the ESP control device. The ESP was not online during this time period, so the CAM limit is not applicable. The ESP is automatically shut down whenever the FCC trips for safety reasons. The opacity from the Bypass Stack was greater than 10% for a total of sixty-one (61) 3-hr averages. The CAM limit is not applicable to the Bypass stack because the emissions are not routed through a control device. For more information on the opacity during this time, refer to the first quarter 2022 Opacity report submitted via Air Services.

This report and cover letter were prepared in accordance with a system designed to assure that qualified personnel evaluated all reasonably available information relevant to compliance with the terms and conditions of the Title V Permit over the period covered by the report and that they then reported to me their conclusions with respect to compliance. Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete. However, the certification of this report and cover letter should not be interpreted to imply that I have personally reviewed all documents, data, or other information underlying the compliance determination. Nor should it be read to imply that the persons responsible for gathering and evaluating the information relied on in preparing this report and cover letter have reviewed all information generated by operations at the facility. As with any regulatory program, it is possible that there were deviations from permit conditions which may not be identified in the normal course of a good faith effort to implement the required compliance efforts under these programs.

In addition, the certification of this report and cover letter should not be construed as containing any admissions that the reported deviations or other events are violations of any applicable requirement. In some cases, applicable rules contain various defences and/or exemptions which may excuse particular deviations. In other cases, the question of whether a particular event constituted a deviation or violation may be subject to interpretational disputes. In still other cases, events may be reported as deviations out of an abundance of caution despite the fact there is insufficient information to determine whether the deviation actually occurred.

If you have any questions concerning this report, please contact Ashley Zapp (ashley.zapp@bp.com or 567-698-4410).

Sincerely,

DocuSigned by:
Des Gillen
90F20640AD13450...

Des Gillen
President - BP-Husky Refining LLC

Ohio Environmental Protection Agency
Deviation Reporting Form

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Total pages in report, including this one (signature page and sections I, II, and III)		15	
Please list any supporting attachments		None	
Reporting deadline		4/30/2022	

NOTE: The deviation reporting period shall be stated in the following format: "xx/xx/xx through zz/zz/zz" where xx/xx/xx and zz/zz/zz are the beginning and end dates for the deviation reporting period respectively.

SIGNATURE FOR STATEMENT
This statement shall be signed by the responsible official as defined in OAC rule 3745-77-01(GG). Making of any false material statement, representation or certification constitutes a violation of ORC 3704.05(H), and subjects the responsible party signing this statement to civil and/or criminal penalties as provided in ORC 3704.06(C) and ORC 3704.

CERTIFICATION
Based on information and belief formed after reasonable inquiry, I hereby affirm, as stated in OAC rule 3745-77-03(D), that the statements and information as transmitted in this Title V report are true, accurate and complete to the best of my knowledge.

Authorized Signature DocuSigned by: Des Gillen 90F20640AD13450... Date April 29, 2022

Name (Please Print) Des Gillen Title President, BP-Husky Refining LLC

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
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QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Reporting Deadline		4/30/2022	

(Part B) - Facility-wide Permit Requirement Reporting

Insignificant Emissions Unit Negative Declarations (Table 1)

List each insignificant emissions unit where no deviations of any PTI terms or applicable requirements for the listed emissions unit occurred, or add rows as necessary to the deviation reporting table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

THERE WERE NO DEVIATIONS OF ANY PTI TERMS OR APPLICABLE REQUIREMENTS FOR THE FOLLOWING LISTED INSIGNIFICANT EMISSIONS UNITS IDENTIFIED IN (PART B.28) OF THE TITLE V PERMIT:
F002, G001, J008, J009, J011, L001, P030, P034, P038, P046, P047, P052, P061, P062, P064, P065, P066, P067, P068, P802, T042, T043, T048, T095, T112, T117, T121, T135, T141, T145, T148, T149, T151, T159, T163, T168, T169, T172, T173, T191, T196, T197, TMP196253

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
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QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Reporting Deadline		4/30/2022	

(PART A) - General Terms and Conditions (Permit Requirement Reporting) (Table 1)

Mark the following box with an 'X' if no General Terms and Conditions deviations occurred

X	**THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART A OF THE TITLE V PERMIT DURING THE REPORTING PERIOD**

Add rows as necessary to the following table for reported deviations (one for each General Term as applicable; see detailed instructions for more information) (Table 2)

TITLE V PERMIT TERM NO. Description	Reporting Requirement (Choose one)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN
				DEVIATION DURATION		DESCRIPTION AND MAGNITUDE OF THE DEVIATION		
	Quarterly	Semi-Annual		DATE / TIME START	DATE / TIME END			

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Reporting Deadline		4/30/2022	

Facility-wide Permit Requirements Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (mark with an 'X' if applicable) **(Table 2)**

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART B OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Part B - Facility-wide and/or IEU permit requirement (Permit Requirement Reporting) - Deviation Reporting (Table 3)

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly	Semi-Annual	ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION: DEVIATION DURATION: DATE / TIME START	DEVIATION INFORMATION: DEVIATION DURATION: DATE / TIME END	DEVIATION INFORMATION: DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION ? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B.7 - ...the permittee shall at all times comply with the effective rules and compliance dates as established by approved extensions, litigation, EPA clarifications, or rule changes as published even if the requirements reflected in the language of this permit are different. [Also reported in Part C - tbl 2]	X	X	Various	Various	Various	The specific deviations to the requirements effective after Feb 1, 2017 that have deviations are listed in Part C - tbl 2 of this deviation report and have been marked "RSR Deviations" for clarification. The details of these deviations for 1Q2022 are included in that table and only generally referenced here so as to not have duplicative information. *(Revisions to 40 CFR 63 Subparts CC and UUU (Refinery MACT I and II) were promulgated on December 1, 2015 as part of EPA's Petroleum Refinery Sector Risk and Technology Review Rule (RSR) and further revisions and clarifications were promulgated on July 13, 2016. The BP-Husky Title V permit includes the Refinery Rule (RSR) MACT requirements that apply to the refinery and that are effective through February 1, 2017. However, the requirements of the RSR that have compliance dates after February 1, 2017 (and thus are not yet effective) are only generally referenced at the Subpart level in this section of the permit.)*			No	No Report	No Report

Part B - Facility-wide and/or IEU permit requirement (Permit Requirement Reporting) - Deviation Reporting (Table 3)

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly	Semi-Annual	ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION ? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
				DEVIATION DURATION							
				DATE / TIME START	DATE / TIME END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
Part B, 2.d)(5)n. [NSPS Subpart VVa as referenced by Subpart GGGa and Part 63 Subpart CC: 40 CFR 60.482-6a]: "Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1a(c) and 40 CFR 60.482-6a(d) and (e).."	X		LDAR Monitoring	8/11/2021	3/31/2022	There are four (4) open-ended lines visually identified by LDAR contractor in the Crude/Vac 1 (P011) process unit pumps	The OELs discovered are on drain lines to the sewer for pumps that are in heavy liquid service. OELs discovered and reported in a previous quarterly deviation report led BPH to initiat a site-wide OEL audit and to request that the LDAR contractor check all pumps in heavy liquid service for OELs.	These four OELs require maintenance and engineering. A work order was issued and an engineering package created. Maintenance and repairs were due to be completed by December 31, 2021; however, due to design issues the engineering package was required to be redesigned. The pumps were unable to be isolated in the first quarter for maintenance repairs to be conducted, but the unit will be going offline in April 2022 for a maintenance shutdown and these repairs will be conducted prior to the unit restarting.	No	No Report	No Report

Other than the deviations listed above (or elsewhere in this report) there were no other deviations of Part II requirements of the Title V permit and other PTIs incorporated in the Title V permit.

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
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FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Reporting Deadline		4/30/2022	

PART C - Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (Table 1)

List each emissions unit where no deviations of any terms for the listed emissions unit occurred, or add rows as necessary to the second table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:

Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
B015	Part C-tbl 2 - H_2S deviation	X
B019	Part C-tbl 2 - H_2S deviation	X
B029	Part C-tbl 2 - H_2S deviation	X
B031	Part C-tbl 2 - H_2S deviation	X
B032	Part C-tbl 2 - H_2S deviation	X
B036	X	X
F001	X	X
F005	X	X
F006	X	X
J004	X	X
J005	X	X
P007	Part C-tbl 2 - H_2S and opacity deviation	Part C-tbl 2 - Table 41 deviation
P009	X	X
P010	X	X
P011	Part C-tbl 2- OEL Deviation	X
P014	X	X
P017 (see Note 2 below)	X	X
P025 (see Note 2 below)	Part C-tbl 2 - deviation	Part C-tbl 2 - deviation
P036 (see Note 2 below)	Part C-tbl 2 - double quench deviation	X

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:		
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
P037	Part C-tbl 2 - SO_2 deviation	X
P048	X	X
P053	X	X
P054	X	X
P803	X	X
T047	X	X
T073	X	X
T102	X	X
T120	X	X
T139	X	X
T164 (see Note 2 below)	X	X
T170 (see Note 2 below)	X	X
T177	X	X
Group B1: B008, B009, B010	X	X
Group B2: B017, B022	Part C-tbl 2 - H_2S deviation	X
Group B3: B030, B033	Part C-tbl 2 - H_2S deviation	X
Group B4: B034, B035	Part C-tbl 2 - H_2S deviation (B035 only)	X
Group P1: P021, P022, P023 (see Note 2 below)	X	X
Group P2: P028, P029 (see Note 2 below)	X	X
Group P3: P041, P043 (see Note 2 below)	Part C-tbl 2 - PSV deviation	X
Group P4: P003, P004	Part C-tbl 2 - NHVcz; visible emission; and H_2S deviation(s)	Part C-tbl 2 - Table 13 Deviation
Group P5: P055, P056, P057, P058	X	X
Group P6: P059, P060, P063	X	X
Group P7: P044, P045	X	X
Group T1: T078, T080, T081, T082, T086, T087, T088, T092,	X	X
Group T2: T113, T114, T115, T116	X	X
Group T3: T089, T153, T154, T155, T156, T157, T161	X	X
Group T4: T010, T011, T012, T013, T014, T051	X	X
Group T5: T045, T046	X	X
Group T6: T019, T084, T174, T187, T188	X	X
Group T7: T016, T017, T019, T020, T021, T024, T025, T026,	X	X
Group T8: T166, T167	X	X
Group T9: T136, T137, T138	X	X

Notes:

1 - This unit has a vent which is routed to a flare and could potentially experience a deviation.

2 - This unit has a vent which is routed to a flare that experienced a deviation. If the vent was active at that time, it may constitute a deviation for this emission unit.

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
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FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 01/01/2022	To: 03/31/2022	From: 01/01/2022	To: 03/31/2022
Reporting Deadline		4/30/2022	

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P025 - Refinery WWT System	**Citation: P025: Part C.18.b)(1)i, b)(2)j.i: [40 CFR 60.690(a)(1)]** The provisions of Subpart QQQ apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987. **Part C.18.c)(3)(c), d)(5)(c): [§60.692-2(a)] -**Each drain subject to 40 CFR 60.692-2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.	X	X	Program Audit	4/22/2020	3/31/2022	Two areas drains, twelve hub drains, and three catch basins in the Hydrogen Unit area were not controlled with water seals and have not been monitored pursuant to NSPS QQQ requirements. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the BPH refinery. This audit found that BPH inadvertently missed including two area drains, twelve hub drains, and three catch basins in the Hydrogen area in the refinery NSPS QQQ Management Program when junction boxes (manholes) were modified for the Flare Gas and Recovery Treating Project.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to be reviewed and verified prior to becoming a final deviation. The verification for these drains was completed on December 31, 2020. The upgrades are scheduled to be completed by December 31, 2022.	No	No Report	No Report
P025 - Refinery WWT System	**Citation: P025: Part C.18.b)(1)i, b)(2)j.i: [40 CFR 60.690(a)(1)]** The provisions of Subpart QQQ apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987. **Part C.18.c)(3)(c), d)(5)(c): [§60.692-2(a)] -**Each drain subject to 40 CFR 60.692-2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.	X	X	Program Audit	4/22/2020	3/31/2022	Fourteen drain hubs, four clean-outs, ten catch basins, and five manholes that were part of the 1993 Benzene Stripper project were not designed to meet the requirements of NSPS QQQ - have not been monitored. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the BPH refinery. This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. The 14 drain hubs, 4 clean-outs, 10 catch basins and 5 manholes installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to be reviewed and verified prior to becoming a final deviation. The verification for these drains was completed on January 15, 2021. Fourteen drain hubs, four clean-outs, two catch basins, and five manholes have been added to the program. Eight catch basins require upgrades to meet QQQ design criteria. The upgrades are scheduled to be completed by December 31, 2022.	No	No Report	No Report
P007 (FCCU / CO Boiler)	**Citation: P007, Part C.12. d)(17)(i) [40 CFR 63 Subpart UUU; 63.1572(c)(1)]** You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart which include requirements regarding accuracy, calibrations and inspection/checks. *[Also reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous Parameter Monitoring System (CPMSs)	1/1/2019	3/31/2022	FCCU Instrumentation used to demonstrate compliance may not be in compliance with all the installation, operation and maintenance requirements of MACT UUU Table 41. (previously reported)	The Refinery Sector Rule (RSR) modifications to MACT UUU require additional accuracy and maintenance requirements of certain FCCU process instrumentation. BPH discovered a flow meter not originally included for MACT UUU compliance.	A Capital Project has been initiated to confirm all of the Table 41 requirements for two flow meters used to verify compliance with MACT UUU at the FCCU. One of the flow meters is known to be out of compliance. This flow meter will be replaced by end of 2Q 2022 during the 2022 FCC Unit Turnaround.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION		DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
					Date / Time Start	Date / Time End						
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004: Part C.40.d)(2)** The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC: *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63 Subpart CC; 40 CFR 63.671(a)]** For each CPMS installed to comply with applicable provisions in §63.670, the owner or operator shall install, operate, calibrate, and maintain the CPMS as specified in paragraphs (a)(1) through (8) of this section. (1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 of this subpart. *[Also reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous Parameter Monitoring System (CPMSs)	1/31/2020	3/31/2022	BPH has identified monitoring Instrumentation in the hydrocarbon flare system that does not meet all of the requirement of 40 CFR 63.671 of Subpart CC. (previously reported)	The refinery sector rule updated 40 CFR 63 Subpart CC requirements in 2015 to include new flare instrumentation requirements. BPH immediately began implementing their plan to come in to compliance and as they have operated, additional flare instrumentation has been identified that does not meet the MACT CC - Table 13 requirements.	This deviation was first identified in 1Q2020 for two flare gas flow meters. A capital project is in progress to update these flow meters and bring them into compliance. The upgrades are scheduled to be completed by December 31, 2022.	No	No Report	No Report
B015 - Crude 1 Furnace; **B017 -** Coker 2 Furnace; **B019 -** Crude Vac 2 Furnace; **B022 -** Naphtha Treater Furnace; **B030 -** DHT-B Train Furnace; **B031 -** Vac 1 Furnace; **B032 -** Coker 3 Furnace; **B033 -** East BGOT Furnace; **B035 -** West Alstom Boiler, **B029 -** DHT A-Train, **P007 -** CO Boiler	**Citations: B015**: Part C.1.b)(2)b, c)(2), f)(1)a.; **B019**: Part C.2.b)(2)e., c)(2), f)(1)c.; **B029**: Part C.3.b)(2)e, f)(1)j.; **B031**: Part C.4.b)(2)d., c)(2), f)(1)f.; **B032**: Part C.5.b)(2)d., c)(2), f)(1)j.; **B017 and B022:** Part C.34.b)(2)e, f)(1)a; **B030 and B033**: Part C.35.b)(2)e., and f)(1)l.; **B035**: Part C.36.b)(2)c., f)(1)b; **P007:** Part C.12.b)(2)e, b(2)f and f)(1)c; **40 CFR 60.104(a)(1)** Refinery heaters/ boilers shall not burn any refinery fuel gas that has a volume-weighted, rolling, 3-hour average H_2S concentration greater than 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot).(NSPS Subpart J, 160 ppmv H_2S).	X		Continuous Monitoring System (CEMS)	01/20/2022 at 15:00 hours	01/20/2022 at 17:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of three (3) 3-hour averages from the TIU mix drum.	Two amine contactors were being swung from one amine system to another due to heat exchanger fouling issues. Gas was shifted to the third amine contactor in the system which, at the time, did not have adequate amine flow through it and began undertreating. The reduced amine treatment caused the H_2S concentration in the TIU fuel gas to rise and the 3-hour H_2S limit was exceeded. In addition, winterization issues on the amine stripper at the time of the event contributed to the reduced treating capability.	Lean amine circulation and steam stripping steam was increased to improve amine treatment and reduce H_2S concentration in the fuel gas. The procedure for swinging the contactors from one system to the other is being updated to include instructions on balancing gas flows between the contactors. Winterization checklists are also being updated.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
B015 - Crude 1 Furnace; **B017 -** Coker 2 Furnace; **B019 -** Crude Vac 2 Furnace; **B022 -** Naphtha Treater Furnace; **B030 -** DHT-B Train Furnace; **B031 -** Vac 1 Furnace; **B032 -** Coker 3 Furnace; **B033 -** East BGOT Furnace; **B035 -** West Alstom Boiler, **B029 -** DHT A-Train, **P007 -** CO Boiler	**Citations: B015**: Part C.1.b)(2)b, c)(2), f)(1)a.; **B019**: Part C.2.b)(2)e., c)(2), f)(1)c.; **B029**: Part C.3.b)(2)e, f)(1)j.; **B031**: Part C.4.b)(2)d., c)(2), f)(1)f.; **B032**: Part C.5.b)(2)d., c)(2), f)(1)j.; **B017 and B022:** Part C.34.b)(2)e, f)(1)a; **B030 and B033**: Part C.35.b)(2)e., and f)(1)l.; **B035**: Part C.36.b)(2)c., f)(1)b; **P007:** Part C.12.b)(2)e, b(2)f and f)(1)c; **40 CFR 60.104(a)(1)** Refinery heaters/ boilers shall not burn any refinery fuel gas that has a volume-weighted, rolling, 3-hour average H_2S concentration greater than 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot).(NSPS Subpart J, 160 ppmv H_2S).	X		Continuous Monitoring System (CEMS)	01/28/2022 at 04:00 hours	01/28/2022 at 06:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of three (3) 3-hour averages from the TIU mix drum.	On January 28, 2022, a tube in the Old Amine Contactor exchanger failed and caused the release of lean amine into the return cooling water. As a result of this failure, amine circulation rates and fuel gas H_2S removal decreased, leading to an H_2S exceedance in fuel gas. The exchanger was scheduled to be taken out of service following the start up of the Coker Gas Unit, but was left in standby service until some additional required piping was installed. Further inspection of the exchanger found that significant wall loss occurred on the cooling water inlet side of the exchanger due to the reduced process conditions.	The leaking exchanger was isolated and taken out of service. An inspection was completed and findings are being applied to decommissioning MOCs.	No	No Report	No Report
P037 - SRU2/3	**Citation: P037 Part C.20.b)(2)h., b)(2)m, d)(11)b, f)(1)i. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration, in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. *[per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]*	X		Continuous Monitoring System (CMS)	01/28/2022 at 08:00 hours	01/30/2022 at 10:00 hours	SO_2 emissions exceeded 250 ppmv on a 12-hour rolling average basis for a total of fifty-one (51) 12-hour averages	On January 28, 2022, a tube in the Old Amine Contactor exchanger failed and caused the release of lean amine into the return cooling water. As a result of this failure, the TRP Amine Stripping process stopped briefly and caused a higher concentration of water vapor in the acid gas feed to the SRUs. The increased water content caused the automatic air controller to add too much air in the front of the SRUs, which led to the tail gas ratio to be SO_2 long and led to excess SO_2 at the tail end of the unit. The exchanger was scheduled to be taken out of service following the start up of the Coker Gas Unit, but was left in standby service until some additional required piping was installed. Further inspection of the exchanger found that significant wall loss occurred on the cooling water inlet side of the exchanger due to the reduced process conditions. At the time of the upset, SRU1 was offline, therefore feed could not be shifted to minimize the event.	Operations isolated the leaking exchanger, reduced rates and tried to stabilize the Sulfur Recovery Unit. Fresh amine was trucked into the refinery, and a temporary caustic injection system was installed in order to regain amine stripping ability. Procedures were developed to assist the operations team in reducing the response time for events where amine leaks into the cooling water system. The exchanger was removed from service, an inspection was completed, and findings are being applied to decommissioning MOCs.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003 - East Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63,670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	02/28/2022 at 16:45 hours 02/28/2022 at 20:30 hours 03/01/2022 at 00:00 hours 03/01/2022 at 01:15 hours 03/01/2022 at 02:45 hours 03/01/2022 at 7:30 hours 03/01/2022 at 9:30 hours 03/01/2022 at 10:15 hours	02/28/2022 at 17:00 hours 03/01/2022 at 00:00 hours 03/01/2022 at 01:00 hours 03/01/2022 at 02:30 hours 03/01/2022 at 06:45 hours 03/01/2022 at 07:45 hours 03/01/2022 at 10:00 hours 03/01/2022 at 10:30 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for at total of forty four (44) 15-minute quadrants during a flaring event	During the shutdown of the Isocracker 2 unit, the 2nd stage recycle compressor tripped and caused a large amount of light material to be sent to the East flare. This led to an upset and trip of the Flare Gas Recovery compressors. While responding to the upset, the amount of steam was increased to the East flare, which led to the NHV deviations. It was also discovered that the NHV calculation in the DCS contained an error that made the NHV appear higher than it was and thus did not immediately alert the operator that the limit was being exceeded.	Operations reduced the steam rate to meet the NHV limit. The DCS calculation was updated to the correct NHVz calculation.	No	No Report	No Report
P003/ P004 - East and West Hydrocarbon Flare	**Citations: P003, P004**: Part C.40.b)(1)b.,C.40.b)(1)e., C.40.b)(1)i., C.40.c)(1)c., C.40.c)(3)a., **P009**: Part C.13.b)(2)k, **P017**: Part C.17.b)(2)e., C.17.b)(2)h., **P025**: Part C.18.b)(2)c., C.18.c)(2)l., C.18.c)(3)r, C.18.c)(3)z., C.18.f)(2)c., **P036**: Part C.19.b)(2)e., C.19.c)(2)a., **T164**: Part C.30.b)(2)b., C.30.c)(1)o., **T170**: Part C.31.b)(2)b., C.31.c)(1)o., **P021, P022, P023:** Part C.37.b)(2)b., C.37.b)(2)e., **P028, P029:** Part C.38.b)(2)e., **P041, P043**: Part C.39.b)(2)b., C.39.b)(2)d., [The Title V references 40 CFR 60.18(c)(1), 63.11(b)(4)] NOTE: The citations above are Title V references only. The actual applicable requirement for visible emissions is now 40 CFR 63.670(c) - The owner or operator shall...operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare."	X		Visual Observation	03/09/2022 at 11:20 hours 03/09/2022 at 12:02 hours	03/09/2022 at 11:28 hours 03/09/2022 at 12:12 hours	Visible emissions occurred at the East and West Flares for a total period of approximately 18 minutes in the two hour period between 11 am - 1 pm.	On March 9, 2022, the Crude Vac 1 furnace automatically tripped offline due to low oxygen (O_2) content and high firebox pressure. Operations began troubleshooting and found that the convection damper had drifted into the closed position. This resulted in a crude unit upset with refinery wide impacts including lifting of several PSV's across the plant. A large amount of high BTU material was sent to the flare followed by lighter material that came from the Sat Gas Plant PSV lifts.	The operations team increased assist steam to the incipient point of the flame to help reduce smoking. All flare gas recovery compressors were on to recover as much flare gas as possible. An investigation into the cause of the damper drifting closed was conducted and corrective actions are being implemented, including implementing preventative maintenance on the damper in both the current and future Crude 1 unit turnarounds.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

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		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	03/09/2022 at 12:00 hours (East Flare) 03/09/2022 at 12:30 hours (West Flare) 03/09/2022 at 14:15 hours (East Flare) 03/09/2022 at 16:00 hours (East Flare)	03/09/2022 at 12:15 hours (East Flare) 03/09/2022 at 12:45 hours (West Flare) 03/09/2022 at 15:15 hours (East Flare) 03/09/2022 at 16:15 hours (East Flare)	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for at total of seven (7) 15-minute quadrants during a flaring event	On March 9, 2022, the Crude Vac 1 furnace automatically tripped offline due to low oxygen (O_2) content and high firebox pressure. Operations began troubleshooting and found that the convection damper had drifted into the closed position. This resulted in a significant crude unit upset with refinery wide impacts. The material being sent to the flare had a variable BTU content and became progressively lighter during the flaring.	Operations increased the Linde hydrogen and natural gas purge to the flare at various points to increase the NHV of the vent gas. An investigation into the cause of the damper drifting closed was conducted and corrective actions are being implemented, including implementing preventative maintenance on the damper in both the current and future Crude 1 unit turnarounds.	No	No Report	No Report
P003/ P004 - East and West Hydrocarbon Flare	**"Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit. "	X		Continuous Monitoring System	03/25/2022 at 23:00 hours	03/26/2022 at 08:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of fifteen (15) 3-hour average exceedances from the East and West hydrocarbon flares.	The shift supervisor was taking photographs for a work order involving the E-Stop button for the FCC Wet Gas Compressor. The plastic protective cover of the E-Stop button was covering the button. When the cover was touched to get a photo, the inside of the cover made contact with the button inside and caused an unplanned emergency shutdown activation.	Emergency shutdown of the FCC unit was initiated. The FCC unit was placed into hot standby until re-starting the unit began the next day. Emergency shutdown procedures were followed and flaring was minimized to the extent possible. The E-Stop button cover is being replaced during the upcoming turnaround starting in April 2022. An investigation into the root cause is in progress and recommendations will be implemented.	No	No Report	No Report
P003/ P004 - East and West Hydrocarbon Flare	**"Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit. "	X		Continuous Monitoring System	03/27/2022 at 17:00 hours	03/27/2022 at 21:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of fifteen (15) 3-hour average exceedances from the East and West hydrocarbon flares.	The FCC and Alky units were in the process of re-starting after being shutdown as part of the FCC trip on 3/25/22. During the startup, PSV 883 on the Alky 3 DIB Tower lifted after a pressure increase in the DIB Tower. Due to the startup and shutdown activities, there was an increased flare base load and the Flare Gas Recovery Compressors could not keep up, which caused high H_2S gas to be vented to the flare.	Operations halted the startup of Alky 3 and quickly worked to de-pressure the tower and get the safety to reseat. The unit startup did not resume until the pressure inside the unit reduced and the PSV reseated. An investigation into the root cause is in progress.	No	No Report	No Report

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		Quarterly	Semi-Annual		DEVIATION DURATION		DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
					Date / Time Start	Date / Time End						
P004 - West Hydrocarbon Flare	**Citation: P004: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	03/26/2022 at 02:45 hours 03/27/2022 at 19:15 hours	03/26/2022 at 03:00 hours 03/27/2022 at 20:15 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for at total of six (6) 15-minute quadrants during a flaring event	The shift supervisor was taking photographs for a work order involving the E-Stop button for the FCC Wet Gas Compressor. The plastic protective cover of the E-Stop button was covering the button. When the cover was touched to get a photo, the inside of the cover made contact with the button inside and caused an unplanned emergency shutdown activation.	During the emergency shutdown of the FCC, a large amount of process gas was initially sent to the flares and then became variable in quantity and composition. Operations adjusted the steam and natural gas purge in order to increase the NHV to meet the limit.	No	No Report	No Report
P003/ P004 - East and West Hydrocarbon Flare	**Citations: P003, P004**: Part C.40.b)(1)b.,C.40.b)(1)e., C.40.b)(1)i., C.40.c)(1)c., C.40.c)(3)a., **P009**: Part C.13.b)(2)k, **P017**: Part C.17.b)(2)e., C.17.b)(2)h., **P025**: Part C.18.b)(2)c., C.18.c)(2)l., C.18.c)(3)r, C.18.c)(3)z., C.18.f)(2)c., **P036**: Part C.19.b)(2)e., C.19.c)(2)a., **T164**: Part C.30.b)(2)b., C.30.c)(1)o., **T170**: Part C.31.b)(2)b., C.31.c)(1)o., **P021, P022, P023:** Part C.37.b)(2)b., C.37.b)(2)e., **P028, P029:** Part C.38.b)(2)e., **P041, P043**: Part C.39.b)(2)b., C.39.b)(2)d., [The Title V references 40 CFR 60.18(c)(1), 63.11(b)(4)] NOTE: The citations above are Title V references only. The actual applicable requirement for visible emissions is now 40 CFR 63.670(c) - The owner or operator shall...operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare."	X		Visual Observation	03/27/2022 at 19:03 hours	03/27/2022 at 19:48 hours	Visible emissions occurred at the East and West Flares for a total period of approximately 6 minutes.	The FCC and Alky units were in the process of re-starting after being shutdown as part of the FCC trip on 3/25/22. During the start-up, PSV 883 on the Alky 3 DIB Tower lifted after a pressure increase in the DIB Tower. Due to the startup and shutdown activities, there was an increased flare base load and the Flare Gas Recovery Compressors could not keep up, which caused visible emissions at the flare.	Operations halted the startup of Alky 3 and quickly worked to de-pressure the tower and get the safety to reseat. The unit startup did not resume until the pressure inside the unit reduced and the PSV reseated. An investigation into the root cause is in progress and recommendations will be implemented.	No	No Report	No Report

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EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.b)(1), f)(1)a.; [OAC rule 3745-17-07(A)].** Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.		X	Continuous emissions monitoring	3/26/2022	3/28/2022	Opacity exceeded 20% 6-minute averages in the bypass stack for four hundred and thiry-nine (439) 6-minute averages.	The shift supervisor was taking photographs for a work order involving the E-Stop button for the FCC Wet Gas Compressor. The plastic protective cover of the E-Stop button was covering the button. When the cover was touched to get a photo, the inside of the cover made contact with the button inside and caused an unplanned emergency shutdown activation. Once this occurred, the FCC regen exhaust gas was routed into the uncontrolled bypass stack until the unit could be re-started.	Adjustments were made to minimize PM emissions. The FCC was restarted as soon as possible and the exhaust gas was re-routed into the CO Boiler and ESP. An investigation into the root cause is in progress and recommendations will be implemented.	No	No Report	No Report
P036 - (Coker 3)	**Citation P036 Part C.19.b)(1)g [40 CFR Part 63, Subpart CC (63.657(f)(2) - Delayed coking unit decoking operation standards]** The owner or operator must maintain the drain water temperature below 210 degrees Fahrenheit during the partial drain associated with the double-quench event. *(NOTE: This specific language is not in the Title V, but condition C.19.b)(1)g references compliance 40 CFR Part 63 Subpart CC,) [Also reported as a Part B-tbl 3 RSR Deviation]*	X		Temperature Monitoring	2/11/2022	2/11/2022	There was one (1) double quenching event that occurred where the drain water temperature exceeded 210 degF.	During the double quench event, draining is conducted with manual valves. There are no records of when the drain is opened or closed so BPH is unable to determine if draining was occurring when the drain water temperature exceeded 210 degF. Based on PI Processbook data available it appears as if a deviation may have occurred.	Operating procedures have been updated to not drain water when temperatures exceed 200 degF to minimize the chance of exceeding the 210 degF limit. Coaching with operations on updated procedure.			
P011 (Crude/Vac 1)	**Citation: P011 Part C.15.b)(1)g., b)(1)i, b)(2)d., b)(2)f.** The permittee shall comply with the applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGGa for equipment leaks. *Pursuant to 40 CFR 63.640(p)(2), equipment leaks that are subject to the provisions of 40 CFR 63 Subpart CC and 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa. [Also reported as a Part B-tbl 3 LDAR Deviation]*	X		LDAR Monitoring	8/11/2021	3/31/2022	There are four (4) open-ended lines visually identified by LDAR contractor in the Crude/Vac 1 (P011) process unit pumps	The OELs discovered are on drain lines to the sewer for pumps that are in heavy liquid service. OELs discovered and reported in a previous quarterly deviation report led BPH to initiat a site-wide OEL audit and to request that the LDAR contractor check all pumps in heavy liquid service for OELs.	These four OELs require maintenance and engineering. A work order was issued and an engineering package created. Maintenance and repairs were due to be completed by December 31, 2021; however, due to design issues the engineering package was required to be redesigned. The pumps were unable to be isolated in the first quarter for maintenance repairs to be conducted, but the unit will be going offline in April 2022 for a maintenance shutdown and these repairs will be conducted prior to the unit restarting.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting Requirement (choose one or both)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT DATE (If no reports were made, state "NO REPORTS" in the space below)
		Quarterly	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P041 - Isocracker 2	**Citation P041; Part C.39.b)(1)a., C.39.b)(1)d, [40 CFR 63 Subpart CC for equipment leaks]** In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program] **[40 CFR 63.648(j)(1)]** Operating requirements. Except during a pressure release, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of less than 500 ppm above background as detected by Method 21 of 40 CFR part 60, appendix A-7.	X		LDAR Monitoring	1/25/2022	1/27/2022	The PSV 02 pilot was monitored with an instrument reading above 500 ppmv above background as detected by Method 21 of 40 CFR part 60.	Operators in the Isocracker Unit identified a leak via an Audio, Visual, Olfactory (AVO) Inspection and contacted the LDAR contractor. Upon monitoring PSV 02, it was discovered to be leaking. Internal damage to the PSV is assumed to be the cause of the leak.	Operations replaced the PSV and it was monitored with an instrument reading less than 500 ppm above background as detected by Method 21 of 40 CFR part 60.	No	No Report	No Report